

**Remarks**

Claim 19 is canceled herein. Claims 1-18 and 20-33 will be pending upon entry of this amendment.

The following remarks are responsive to the Office action mailed March 2, 2006.

Applicants respectfully note that in the Office Action Summary the specification is indicated as being objected to by the Examiner (item 9). However, as best understood by applicants, no objections to the specification appear in the Detailed Action.

**Response to Election/Restriction Requirement**

Applicants hereby affirm the election, without traverse, made by the undersigned, of Group I (claims 1-18 and 20-33) for further prosecution on the merits. Claim 19, which was not elected, is canceled herein. Applicants reserve the right to further pursue the non-elected claim in a separate application.

**Response to Rejection of Claims**

**Claim 1**

Claim 1 is directed to a mass produced absorbent article. The absorbent article comprises an absorbent member adapted to retain liquid therein, at least one other component operatively connected to the absorbent member in a unit, and an image. The image includes at least one ink having the color of one of cyan, magenta, yellow and black. The image is printed in a non-contact manner on at least a portion of the one component by ink jets at a resolution of about 100 dpi with the component moving under the ink jets at a speed of at least about 30.5 mpm (100 fpm). Any area in the image having a cyan colored ink applied

at maximum threshold thereto has a coverage area ratio of cyan colored ink of at least about 3%, any area in the image having a magenta colored ink applied at maximum threshold thereto has a coverage area ratio of magenta colored ink of at least about 5%, any area in the image having a yellow colored ink applied at maximum threshold thereto has a coverage area ratio of yellowed colored ink of at least about 6%, and any area in the image having a black colored ink applied at maximum threshold thereto has a coverage area ratio of black colored ink of at least about 6%.

As mentioned in the specification, the recited article has an image that is darker (i.e., has more vibrant color) when the image is applied at high line speeds (e.g., 100 fpm or greater) even though the output of the print heads is set to dispense an unconventionally low quantity of ink (100 dots per inch). In other words, the image on the recited article is more vibrant, brighter, and stands out better visually than those of the prior art even though it is formed at a high line speed and with less ink. At least to the inventors, this was counterintuitive and a surprising result, the intuitive solution to increasing the line speed being to increase the ink output to keep up with the faster moving article.

Claim 1 is submitted to be nonobvious and patentable over the references of record, and in particular, U.S. Patent No. 5,503,076 (Yeo) in view of U.S. Patent No. 6,096,412 (McFarland et al.), in that whether considered alone or in combination the references fail to show or suggest an absorbent article comprising an image that was printed in a non-contact manner on at least a portion of the one component by ink jets at a resolution of about 100 dpi with the component moving under the ink jets at a speed of at least about 30.5 mpm (100 fpm).

Yeo (with particular reference to Figs. 1 and 2 thereof), discloses a multi-color printed nonwoven web laminate 10 having a fibrous nonwoven facing layer 12, a substrate layer 14 and a plurality of adhesive-inks 16. The adhesive inks 16 adhesively bond the facing layer 12 to the substrate layer 14, and impart a multi-color pattern which is visible through the nonwoven facing layer 12. Yeo further discloses that flexographic and ink-jet printing can be used to apply the adhesive inks 16. However, Yeo fails to teach or suggest the ink is applied at a resolution of about 100 dots per inch (dpi) as recited in claim 1. In fact, Yeo is also completely silent regarding the number of dpi used to apply the adhesive ink to the article.

McFarland et al. disclose a disposable paper product comprising a fibrous sheet (e.g., paper towels, facial tissue, bath tissue, napkins, cotton pads) having an image thereon. The ink used to form the image on the sheet is tough so that it resists being rubbed off. The ink can be applied to the fibrous sheet using various printing processes including lithography, letterpress, ink jet printing, gravure, screen printing, intaglio, and flexography. See column 17, lines 37-44. However, McFarland et al. fail to disclose or otherwise even suggest the number of dpi that should be used to apply ink to the fibrous sheet. Accordingly, McFarland et al. fail to teach or suggest an absorbent article comprising an image that was printed in a non-contact manner on at least a portion of the one component by ink jets at a resolution of about 100 dpi as recited in claim 1.

Because Yeo and McFarland et al. each fail individually to teach or suggest an absorbent article comprising an image that was printed in a non-contact manner on at least a portion of the one component by ink jets at a resolution of about 100 dpi, a

combination of Yeo and McFarland et al. also fails to teach or suggest such a feature.

Applicants further point out that the Office action is silent with respect to this feature. That is, the Office action fails to assert that either of the cited references, Yeo or McFarland et al., teach or suggest an absorbent article comprising an image that was printed in a non-contact manner on at least a portion of the one component by ink jets at a resolution of about 100 dpi.

For these reasons, claim 1 is submitted to be patentable over the references of record including the Yeo in view of McFarland et al.

Claims 2-18 depend either directly or indirectly from claim 1 and are submitted to be patentable over the references of record for at least the same reasons as claim 1.

#### Claims 11 and 12

Claim 11, which depends indirectly from claim 1, further recites that the image includes multiple separable design elements, none of the design elements being smaller than about 0.64 centimeters (0.25 inches) in height. Claim 12 depends from claim 11 and further recites that one of the design elements constitutes a focal design element, the height of the focal design element being at least about 1.91 centimeters (0.75 inches).

Neither Yeo nor McFarland et al. disclose the dimension of a design element, nor would it would have been obvious to one of ordinary skill in the art to modify Yeo or McFarland et al. on the basis that discovering the optimum value of a result effective variable involves only routine skill in the art. See page 6 of the Office action citing *In re Boesch and Slaney*.

Such a position appears to be the very position rejected by the court in *In re Antonie* 195 USPQ 6 (CCPA 1977). In particular, the court noted that an assertion that it would always be obvious to one of ordinary skill in the art to try varying every parameter of a system in order to optimize the effectiveness of the system is improper "if there is no evidence in the record that the prior art recognized that particular parameter affected the result. *Id.* at 8 (emphasis added). Thus, the court made it clear that the recognition of a particular parameter as a result-effective variable must come from the cited reference.

In this case, neither Yeo nor McFarland et al. teach that the dimension of the design element is a result-effective variable.

For these additional reasons, claims 11 and 12 are further submitted to be non-obvious and patentable over the references of record.

#### Claim 20

Claim 20 is directed to a mass produced absorbent article comprising an absorbent member adapted to retain liquid therein, at least one other component operatively connected to the absorbent member in a unit, and an image including at least one process color ink, the image being printed in a non-contact manner on at least a portion of said one component by ink jets, the image including at least one separable design element being outlined in one selected color and being free of said selected color as shading in an interior of the design element, the design element having a height of no less than about 0.64 centimeters (0.25 inch).

Claim 20 is submitted to be nonobvious and patentable over the references of record, and in particular Yeo in view of McFarland et al., for reasons similar to those set forth above in connection with claims 11 and 12. That is, whether considered alone or in combination the references fail to show or suggest an absorbent article comprising a design element having a height of no less than about 0.64 centimeters (0.25 inch). In particular, neither Yeo nor McFarland et al. teach that the dimension of the design element is a result-effective variable. As such, one skilled in the art would not have found it obvious to modify Yeo or McFarland et al. in the manner advanced in the Office action.

Claims 21-32 depend from claim 20 and are submitted to be patentable over the references of record for at least the same reasons as claim 20.

#### Claim 33

Claim 33 is directed to a mass produced absorbent article comprising an absorbent member adapted to retain liquid therein, at least one other component operatively connected to the absorbent member in a unit, and an image including at least one ink having the color of one of cyan, magenta, yellow and black, the image being printed in a non-contact manner on at least a portion of said component by ink jets at a resolution of about 100 dpi with the outer cover moving under the ink jets at a speed of at least about 30.5 mpm (100 fpm), wherein a color difference (DE\*) value for any cyan colored ink in the image as compared to a background color of said component on which the image is printed is at least about 6, the DE\* value for any magenta colored ink in the image has a color difference (DE\*) of at least about 9, the DE\* value for any yellow colored ink in

the image has a color difference (DE\*) of at least about 8, and the DE\* value for any black colored ink in the image has a color difference (DE\*) of at least about 6.

Claim 33 is submitted to be non-obvious and patentable over the references of record, and in particular Yeo in view McFarland et al., for the same reasons set forth above with respect to claim 1. That is, whether considered alone or in combination the references fail to teach or suggest the recited absorbent article wherein the image is printed in a non-contact manner on at least a portion of the component by ink jets at a resolution of about 100 dpi.

**Conclusion**

In view of the foregoing, favorable consideration and allowance of claims 1-18 and 20-33 is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Richard L. Bridge". The signature is written in a cursive, flowing style.

Richard L. Bridge, Reg. No. 40,529  
SENNIGER POWERS  
One Metropolitan Square, 16th Floor  
St. Louis, Missouri 63102  
(314) 231-5400

RLB/PEB/bcw